1. Campaign Web Site

-- The primary mode for posting satellite data on the Campaign Web Site will be for each satellite team to construct its own web pages and the Campaign Site to provide links. Satellite data sets can be large, and in addition, the satellite teams are best equipped to maintain the posted data and documentation.

-- The default for posting new material on the Campaign site is that it be password protected, to avoid a range of issues, including local rules about distributing satellite images of the Middle East.

-- The site will contain inputs from TOMS & SeaWiFS (Hsu); NAAPS, AVHRR, & geostationary (Durkee); MISR (Kahn, Earl.hansen@jpl.nasa.gov, N.A.Ritchey@larc.nasa.gov); MODIS, meteorology.

-- The site will also contain coverage maps and tables for all satellites. Durkee is producing a merged summary of satellite events.

-- Dave Giles will keep an inventory of inputs, and request missing data, as needed.

2. Surface Site Conditions for Satellite Aerosol Retrieval Validation

2.1. Land Sites

Hamin ("HUH-meem"**), Mazaria** -- Good uniform desert targets to the N and NE of these sites. There is a non-uniform oasis arc to the south. Hamim: Further south, there are dunes having variable reflectivity. Dune height seems to increase south to Hamim. It's hard to estimate, but the largest dunes might be 40-60 feet high at places near the site. The terrain is very open to the North. Mazaria: The community of Mezaira appeared to be more developed than near Hamim and had a lot more irrigation plots (plants and grass fields). The site itself was removed from this area somewhat, at a higher elevation and isolated.

Al Khaznah -- Good uniform desert target to the N of this oasis. The area to the S looks ok, but more variable. This site is close to Abu Dhabi.

SMART -- Uniform desert nearby. May not be able to fly over in AM, more likely allowed after 1:00 PM and on weekends.

Saih Salam -- Surrounded by uniform desert, but is in restricted air space. It's difficult to recall the region around Saih Salam but I believe it was fairly uniform. The immediate area was a gated base, with several large corrals which I was told were for raising deer? though there were no animals present.

Jabal Hafeet ('juh-BAL huh-FEET') -- Near top of ridge, variable surface. Jabal Hafeet is an observation plateau carved on a mountainous region that rises fairly abruptly from the surrounding very flat plains. The terrain drops very steeply on both sides of the plateau.

2.2. **Coastal Sites**

MAARCO -- Uniform desert starting about 1 km E.

Al Qlaa ('kuh-LAH') -- Quite variable surface over nearby land and water. Al Qlaa is on the water's edge and is situated on a local person's property. The terrain is variable and has some buildings and other infrastructure nearby.

Um Al Quwain -- Good uniform desert targets to the E and SE. There is a town nearby to the W.

Dhadnah ('DED-nuh')-- On Gulf of Oman. Dhadnah is not right on the gulf, but it's not far. Ramzan could tell you more accurately, but it might be a kilometer or two inland. It abuts a horticultural garden of unknown extent.

2.3. **Island Sites**

Abu Al Bu -- Oil platform in the darkest water of the Campaign area. Downward-looking radiometer to measure water-leaving radiance.

Sir Bu Nuair -- Fairly dark water, but still probably "Case 2."

Dalma -- This is a tourist spot; boats are available. There is shallow water around, but relatively dark water appears to the SW, and possibly to the E.

** **Water-leaving radiance** is a big issue for satellite validation in waters around the island sites. It would be a great help to have about four SIMBAD instruments, one each to be deployed on boats at Sir Bu Nuair and Dalma, one to share among the coastal sites, and one spare. This could also be an opportunity for local outreach -- students could help make measurements of water-leaving radiance and aerosol optical depth.

3. **Priorities**

3.1. Full characterization of **dust over water**. This is the highest priority for MODIS, MISR, SeaWiFS, TOMS, and a high priority for AVHRR & geostationary.

3.2. Full characterization of **dust over bright land**. This is the next-highest priority for MODIS, MISR, SeaWiFS, TOMS, and a high priority for others.

3.3. AVHRR & geostationary would like about half the dust-over-bright-land cases to be full characterization, and half to be shorter sequences involving just a **vertical profile near a surface site**. Could be a component of a larger flight plan.

3.4. CAR and AERONET would like **profile** + **BRDF** sequences over two land sites and two water sites at four solar zenith angles (SZA): **75, 50, 30, and 10** degrees. Given what we know about the sites currently, the sites selected are: **Abu Al Bu** (Case 1 water); **Dolma** (Case 2 water); north, between **Hamin & Mazaria** (bright desert), and **Um Al Quwain** (bright desert). The four SZA need not be done on the same day, since the surface is not expected to change significantly, so some of these can be done as part of "full characterization" sequences, and some can be done as components of larger flight plans.

3.5. Quickbird and ASTER would like **column AOT** + **a vertical profile** giving height-resolved size distribution over an urban site.

3.6. MODIS Clouds would like **BRDF over stratus cloud**, if conditions permit.

3.7. MODIS, MISR, SeaWiFS, TOMS, and others would like **airmass characterization**, involving a circuit of transit legs among surface stations, with the aircraft sampling in a significant aerosol layer.

** Since many of these goals dovetail, with **careful planning and some good luck**, we may actually complete this entire list during the UAE-2 Campaign.

4. **Other Points**

4.1. One of the biggest issues will be finding **cases where dust dominates** the aerosol column, and pollution is at a minimum.

4.2. We could use a **pronunciation guide** to the names. Also any information about **local customs** that we should take into account.

4.3. We discussed a **field planning cycle** that includes a **4:00 PM** weather briefing, model prediction briefing, and discussion of options for the coming flight day. Flight planning would follow, with an effort made to meet as many objectives as possible with some plans, and to provide at least a few alternative plans for the coming day. A weather briefing, with discussion of the latest NOAA 15 (07:00 AM), and NOAA 17 (09:00 AM, if available) images, and plan selection would take place **the morning of the flight**, early enough so the selected plan can be implemented.